

METHOD AND APPARATUS FOR ISSUING AND MANAGING GIFT

CERTIFICATES

EM566048152US

Cross-Reference to Related Corresponding Applications

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all This is a continuation-in-part of commonly owned, co-pending U.S. Patent Application Serial No. 08/762,128 entitled "Postpaid Traveler's Checks" filed December 9, 1996 and commonly owned, co-pending U.S. application Serial No. 08/858,738 entitled "System and Process for Issuing and Managing Forced Redemption Vouchers having Alias Account Numbers" filed May 19, 1997, the entirety of each incorporated by reference herein.

10 This application is related to co-pending application (attorney title: "Dynamically Changing System for Fulfilling Concealed Value Gift Certificate Obligations," attorney docket number ^{08/994,124} ~~WD2-96-445~~, filed December 19, 1997, inventors: Jay S. Walker, Andrew S. Van Luchene, Daniel E. Tedesco, James A. Jorasch), the entirety of which is incorporated by reference herein.

Background of the Invention

Field of the Invention

20 The present invention relates generally to the field of transaction processing methods and apparatus. More particularly, the present invention relates to methods and apparatus for issuing and processing gift certificates which may be issued and redeemed in conjunction with credit card accounts.

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authentication process, however, these checks are subject to the same fraud problems as conventional checks and gift certificates.

With losses from check fraud now exceeding ten billion dollars per year, many merchants are only willing to accept a personal check if the check is accompanied by photo identification as well as a major credit card to prevent fraud. For this reason, convenience checks are not well suited as gift items since a recipient's name cannot be pre-printed on the check. Additionally, card holders with balances near their credit line may be reluctant to make further purchases after giving out convenience checks to recipients, thereby defeating the purpose of incenting charge volume. Convenience checks returned to the issuer for clearing might result in the card holder's account exceeding the established limit if the card holder had made additional purchases.

Some credit card companies have offered other limited-use programs combining credit cards with gift certificates, such as the AMERICAN EXPRESS GIFT CHECK program and the AMERICAN EXPRESS "BE MY GUEST" program. The AMERICAN EXPRESS GIFT CHECK program allowed card holders to purchase pre-paid "gift checks" in certain specified denominations by either paying for them in cash or by charging them to their AMERICAN EXPRESS account. Once paid for and provided to a card holder, the gift check could be given to a recipient who may redeem the gift check at a merchant. Because the gift checks are processed in the same manner as traveler's checks, the recipient can only redeem such checks wherever AMERICAN EXPRESS traveler's checks are accepted, reducing the utility of the checks. Additionally, gift checks stolen in the mail may be fraudulently redeemed.

redemption of a gift certificate for an identified value. The request includes a certificate identifier. The method further includes the steps of determining an account identifier based on the certificate identifier, and accessing stored account data associated with the account identifier.

5 According to the second aspect of the present invention, the method also includes the step of analyzing the account data to determine whether to authorize the redemption of the identified gift certificate. An authorization code is then transmitted to a remote terminal. The authorization code represents an indication that redemption of the identified gift certificate is authorized. The method still further includes the step of
10 updating the account data to reflect redemption of the identified gift certificate for the identified value.

An apparatus is also disclosed and claimed to implement the methods of the present invention.

It is an object of the present invention to provide a method and apparatus for more
15 securely redeeming gift certificates associated with a credit card or other financial account. Another object of the present invention is to provide a method and apparatus for issuing and redeeming gift certificates utilizing a secure alias account identifier. The above object and other objects, features and advantages are readily apparent from the detailed description when taken in connection with the accompanying drawings.

Brief Description of the Drawings

A more complete appreciation of the invention and many of the attendant advantages thereof may be readily obtained by reference to the following detailed description when considered with the accompanying drawings, wherein:

5 Figure 1 is a schematic block diagram illustrating the general information flow between parties according to a first embodiment of the present invention;

Figure 2 is a schematic block diagram of a credit card issuer's data processing system;

10 Figure 3 is a schematic block diagram of a credit card processor's data processing system;

Figure 4 is a table illustrating the record structure of the credit card account table depicted in Figure 2;

Figure 5 is a table illustrating the record structure of the certificate table depicted in Figure 2;

15 Figure 6 is a table illustrating the record structure of the transaction table depicted in Figure 2;

Figure 7 is a table illustrating the record structure of the transaction request table depicted in Figure 3;

20 Figure 8 depicts an exemplary gift certificate having a certificate identifier and additional relevant features;

Figure 9 is a flow chart illustrating the process steps performed by a merchant card authorization terminal during redemption of a gift certificate according to the present invention;

Figures 10A-10B is a flow chart illustrating the process steps performed by a credit card issuer central controller during redemption of a gift certificate according to the present invention;

Figure 11 is a schematic block diagram illustrating the general information flow between parties according to a second embodiment of the present invention;

Figure 12 depicts a second exemplary gift certificate having a visually obscured security code for use with the system shown in Figure 11;

Figure 13 is a flow chart illustrating the process steps performed by a merchant card authorization terminal during redemption of a gift certificate according to the second embodiment of the present invention; and

Figures 14A-14B is a flow chart illustrating the process steps performed by a credit card issuer central controller during redemption of a gift certificate according to the second embodiment of the present invention.

Detailed Description

A first embodiment of the method and apparatus of the present invention will now be discussed with reference to Figures 1-10B. Referring to Figure 1, the general information flow between parties according to a first embodiment of the present invention is depicted in schematic block diagram format.

As illustrated by system 100, in the first embodiment of the present invention, a credit card issuer 102 produces a gift certificate associated with a credit card account. According to the present invention, a gift certificate may be any instrument or token which represents financial value, including a traditional paper certificate, a stored value card, or a

magnetic stripe card having an alias account number thereon. Credit card issuer 102 may be a bank or other entity having the sub-systems necessary to issue and maintain general purpose credit/debit accounts. Credit card issuer 102 assigns a corresponding certificate identifier which may be used to identify the certificate and the associated credit card account. Accordingly, the certificate identifier is an alias identifier which provides an indirect link to the credit card account of credit card holder 104. Preferably, the gift certificate identifier is a sixteen digit numeric value, which has not been previously assigned to an existing credit card account, so as to be compatible with conventional credit card transaction processing systems. The gift certificate, including the certificate identifier, is distributed to credit card holder 104, the party responsible for the account.

According to the first embodiment, credit card holder 104 determines a maximum value for the certificate and transfers the certificate, including the certificate identifier and an indication of the maximum value, to recipient 106. Recipient 106 may then present the gift certificate to pay for goods and/or services at participating merchants, such as merchant 108. A participating merchant is one that is capable of processing credit card transactions on behalf of the credit card issuer designated on the gift certificate, such as gift certificate 820 more fully described with reference to Figure 8. Upon presentation of the gift certificate, merchant 108 verifies the authenticity of the gift certificate via credit card processor 110.

To verify the authenticity of the gift certificate, merchant 108 transmits the certificate identifier and a redemption amount to credit card processor 110. Such transmission may be accomplished using a conventional telecommunications link and a card authorization terminal ("CAT") such as a VeriFone model OMNI® 490. Credit card

processor 110, such as First Data Corp., acting as a commercial clearing house for credit card transactions, receives the data and forwards the data to credit card issuer 102. Credit card issuer 102 determines whether the gift certificate identifier is valid and whether the associated credit card account has sufficient available credit to honor the gift certificate. If the received data indicates that the gift certificate is not authentic or that the credit card account cannot support the redemption amount, credit card issuer 102 transmits an authorization code indicating that the transaction is declined to credit card processor 110. Otherwise, credit card issuer 102 transmits an authorization code indicating that the transaction is approved to credit card processor 110. In either event, credit card processor 110 forwards the authorization code to merchant 108 for completion of the transaction.

Referring now to Figure 2, an exemplary credit card issuer central controller ("CCI") 200 is illustrated. CCI 200 could be any conventional programmable digital computer having sufficient processing power, data storage, and communications facilities to accomplish the data processing tasks typically required of a credit card issuer. As shown, CCI 200 generally includes a central processing unit ("CPU") 210, a clock 212, a random access memory ("RAM") 214, a read only memory ("ROM") 216, a communication port 218, and a data storage device 220. Communication port 218 provides a connection between CCI 200 and transaction authorization network 112 allowing communication between CCI 200 and transaction authorization network 112.

As shown in Figure 2, storage device 220 stores a database of account, certificate and transaction data, including a credit card holder account table 400, a certificate table 500 and a transaction table 600. Tables 400, 500 and 600 comprise at least a portion of the database stored by storage device 220 and are described more fully with reference to

Figures 4-6 respectively. Storage device 220 further stores instructions for performing credit card issuer redemption process 1000. Storage device 220 is preferably a magnetic disk drive, but could be a CD-ROM drive, optical disk drive, RAM drive or any other conventional data storage device.

5 Referring now to Figure 3, an exemplary credit card processor central controller ("CCP") 300 is illustrated. CCP 300 could be any conventional programmable digital computer having sufficient processing power, data storage and communications facilities to accomplish the data processing tasks typically required of a credit card processor. As shown, CCP 300 generally includes a central processing unit ("CPU") 310, a clock 312, a
10 random access memory ("RAM") 314, a read only memory ("ROM") 316, a communication port 318, and a storage device 320. Communication port 318 provides a connection between CCP 300 and transaction authorization network 112, allowing communication between CCP 300 and transaction authorization network 112. CCP 300 also includes storage device 320 for storing a transaction request table 700 which is
15 described more fully with reference to Figure 7. Storage device 320 further stores instructions for processing credit card processor redemption process 1100. Storage device 320 is preferably a magnetic disk drive, but could be a CD-ROM drive, optical disk drive, RAM drive, or any other conventional data storage device.

20 Data Tables

Figure 4 illustrates the contents of credit card holder account table 400 in tabular format. Each record of account table 400 includes, but is not limited to, seven information elements representing information pertaining to a card holder account.

Each record of certificate table 500 defines the parameters of a certificate and provides a link to the account identifier of the credit card or other financial account from which funds will be drawn to back the gift certificate. It should be noted that the present invention is not limited to credit card accounts. The present invention will provide similar benefits and operate effectively in conjunction with other types of financial accounts, such as checking accounts and savings accounts linked to automated teller machine ("ATM") cards. Each record of certificate table 500 includes certificate identifier field 510 which stores the certificate identifier of the certificate associated with the record stored in table 400. Each record of certificate table 500 also includes account identifier field 512 which acts as a pointer to the associated credit card account. Each certificate record further includes maximum value field 514 for storing the maximum value of the certificate. Preferably, the contents of field 514 are defined by the credit card holder 104. In an alternate embodiment, credit card issuer 102 may define the contents of field 514.

Expiration date field 516 stores the date on which the associated certificate expires; status field 518 stores a code representing the status of the associated certificate; and security code field 520 stores a security code which may be required to authorize a recipient's redemption of the associated certificate. The second embodiment of the present invention employing a security code is described more fully with reference to figures 11-14B. In the second embodiment, the security code must be presented by the person redeeming the corresponding certificate. The security code and the expiration date are set by the credit card issuer in the present embodiment. Alternatively, however, the expiration date and the security code can be set by the credit card holder. In another

variation of the second embodiment, the security code set by the credit card holder can be complemented by personal information identifying the intended recipient, such as the recipient's zip code ("06468"), as shown in field 520 of record 504.

In yet another embodiment of the present invention, personalized challenge field 522 and personalized response field 524 may be employed to improve the security of gift certificates. Generally, field 522 stores a challenge which is presented to the recipient of a gift certificate at the time of redemption via the card authorization terminal to verify the identity of the person attempting to redeem the gift certificate. The contents of field 522 may be defined by either the credit card holder or the intended recipient. Similarly, the correct response to the challenge stored in field 522 is stored in field 524. Like the challenge, the response may be defined by either the credit card holder or the intended recipient, allowing the security challenge and response to be personalized.

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Uses remaining field 526 stores the remaining number of times the gift certificate may be used. Field 526 will be initially populated with "1" for a record corresponding to a single use gift certificate. For a multiple use gift certificate, field 526 may be populated with a code indicating the multiple use nature of the corresponding gift certificate. Value remaining field 528 stores the remaining value for which the gift certificate may be redeemed. Prior to redeeming the corresponding gift certificate, the contents of value remaining field 528 will equal the contents of maximum value field 514. One of ordinary skill in the art will realize that variations and combinations of fields 526 and 528 may be implemented.

Certificate table 500 contains three records: 502, 504 and 506. Record 502 represents a single-use gift certificate payable up to \$50.00 which was redeemed for

request table 700 includes merchant identifier field 710 that stores data identifying the merchant initiating the request to authorize a transaction. Transaction request table 700 also includes date field 712, time field 714, account/certificate identifier field 716 and transaction amount field 718 for storing the date, time, account/certificate identifier and transaction amount, respectively. Table 700 further includes authorization code field 720 for storing the authorization code transmitted to the merchant indicating that the transaction is authorized. If the transaction request is not authorized, the authorization code field may remain unpopulated or may be populated with data representing an unauthorized transaction.

Referring now to Figure 8, there is depicted an exemplary gift certificate in accordance with the first embodiment of the present invention. Gift certificate 800 is a single-use financial instrument that may be negotiated by the bearer, as indicated by the example at reference numeral 810. Gift certificate 800 corresponds to record 502 of certificate table 500, and includes the name of the credit card holder 812, a maximum value 814, and an expiration date 816. Gift certificate 800 expires on 10/15/97 and is redeemable for merchandise worth up to the maximum value, in this case \$50.00. Alternatively, gift certificate 800 may be redeemed for \$50.00 cash.

Gift certificate 800 further includes a certificate identifier 818 and the name of the credit card issuer 820. The sixteen-digit certificate identifier 818 is, in fact, a corresponding alias account number. There is no way for a person to visually inspect gift certificate 800 to discern the account number belonging to credit card holder 812. The person would only see the certificate identifier (alias account number) and would not have access to the entire available credit line of the credit card holder. The name of the

credit card issuer 820 is provided to indicate that the gift certificate is redeemable by any merchant who accepts credit cards from the designated issuer.

Having thus described the system architecture and components of the present embodiment, the operation of the system will now be described in greater detail with
5 reference to Figures 9 and 10A-10C with continuing reference to Figures 1-8. It is to be understood that the software instructions necessary to provide the functionality described herein are preferably stored in a storage device such as 220 or in a ROM such as 216.

Referring now to Figure 9, there is illustrated the process steps performed by a merchant when redeeming a gift certificate according to the present invention. Although
10 the merchant may perform these steps manually, they are preferably performed with the aid of a networked card authorization terminal.

According to the redemption process, the merchant receives a gift certificate as payment for goods or services. Upon the merchant's receipt of the gift certificate, the card authorization terminal of the merchant, as shown at step 910, reads the certificate
15 identifier and determines the redemption amount. As previously indicated, the certificate identifier is preferably printed on the certificate for easy reading by a merchant, but the certificate identifier could easily be included on a paper certificate in machine readable form through the use of bar codes, magnetic stripes or "MICR" type face. If the certificate is embodied in a magnetic stripe card or stored value card, the certificate
20 identifier and other information can be stored and read using the magnetic stripe or other data storage device such as RAM.

The redemption amount is determined based on the face value of the certificate and the value of the goods and/or services to be purchased. If the face value of the gift

certificate is less than or equal to the value of the goods and/or services to be purchased, the redemption amount equals the face value of the gift certificate. If the face value of the gift certificate is greater than the value of the goods and/or services to be purchased, the redemption amount may be set equal to either the face value of the gift certificate or the value of the goods and/or services to be purchased, possibly depending on whether the gift certificate is a single-use gift certificate or a gift certificate which may be partially used, such as a stored value card. As shown at step 912, the card authorization terminal then transmits a request for authorization, including the certificate identifier and the redemption amount, to CCP 300.

At step 914, the card authorization terminal receives an authorization code from CCP 300 indicating whether the transaction is authorized. As illustrated by decision step 916, if the transaction is authorized, the card authorization terminal processes the gift certificate transaction at step 920. If the received authorization signal indicates that the transaction is not authorized, the card authorization terminal denies redemption of the gift certificate according to step 918.

Referring now to Figures 10A-10C, there are illustrated the instructions 1000, or process steps performed by CCI 200 when authorizing a redemption of a gift certificate in accordance with the present invention. At step 1010, CCI 200 receives a request for authorization of a gift certificate. The request for authorization originates with the merchant and is routed through CCP 300. The request for authorization includes the certificate identifier and the redemption amount.

At step 1012, CCI 200 searches certificate identifier field 510 of certificate table 500 for relevant certificate data based on the received certificate identifier. CCI 200 then

determines if the received certificate identifier is valid, as shown by step 1014. A received certificate identifier is valid if a record having a matching certificate identifier is found and if status field 518 of the record indicates that the certificate is "active." If CCI 200 determines that the received certificate identifier is not valid, CCI 200 transmits an authorization code declining the transaction, as shown by step 1016. If CCI 200 determines that the received certificate identifier is valid, CCI 200 retrieves the corresponding record from certificate table 500 at step 1018.

As shown by steps 1020-1022, CCI 200 then retrieves the system date/time and compares it to the certificate expiration date stored in field 516 and determines whether the gift certificate bearing the certificate identifier has expired. If the gift certificate has expired, CCI 200 performs step 1024 and transmits an authorization code declining the redemption of the identified gift certificate. Otherwise, CCI 200 performs step 1026 and compares the received redemption amount to the value stored in maximum value field 514. According to step 1028, if the redemption amount is greater than the value stored in field 514, CCI 200 performs step 1030 and transmits an authorization code declining the redemption of the gift certificate. If the redemption value is less than or equal to the maximum value of the gift certificate, CCI 200 retrieves the associated credit card account record from table 400 and compares the redemption value to the amount stored in available credit line field 420.

If sufficient credit is not available, CCI 200 transmits an authorization code declining the transaction, as shown by steps 1034 and 1036. If sufficient credit is available, CCI 200 processes step 1038 and records transaction information in transaction table 600. CCI 200 then updates status field 518 of the relevant record of certificate table

500 to indicate redemption of the certificate and transmits an authorization code allowing the gift certificate redemption, as shown by steps 1040 and 1042.

Security Code Embodiment

5 An alternate embodiment of the method and apparatus of the present invention will now be discussed with reference to Figures 11-14B. Referring to Figure 11, the general information flow between parties according to the alternate embodiment of the present invention is depicted in schematic block diagram format.

System 1100 depicted in figure 11 is similar to system 100 depicted in figure 1. A significant difference between systems 100 and 1100 is that in system 1100, credit card holder 104 transmits a gift certificate request to credit card issuer 102 instead of simply receiving an unsolicited bearer certificate. The gift certificate request depicted in figure 11 includes the card holder account identifier and a maximum value. Of course, the credit card holder could optionally specify the recipient, the number of times the certificate may be used, the address of the recipient, or other information defining the characteristics of the gift certificate. In response, credit card issuer 102 produces a gift certificate associated with data received from credit card holder 104. As previously described with reference to system 100, credit card issuer 102 assigns a corresponding certificate identifier which may be used to identify the certificate and the associated credit card account. Credit card issuer then distributes a security code and the gift certificate, including the certificate identifier, to credit card holder 104, the party responsible for the account.

Credit card holder 104 then transfers the gift certificate, including the certificate identifier and an indication of the maximum value, to recipient 106. In addition, credit

card holder 104 transmits the security code to recipient 106. Of course, the distribution of the gift certificate and security code could occur in other ways. For example, if credit card holder 104 provided credit card issuer with the address of the recipient, credit card issuer could distribute both the gift certificate and the security code directly to the recipient.

- 5 Preferably, credit card issuer 102 would separate the gift certificate and security code and stagger the delivery of the two items to improve security.

Upon receiving both the gift certificate and the security code, recipient 106 may then present the gift certificate to pay for goods and/or services at participating merchants, such as merchant 108. Upon presentment of the gift certificate, merchant 108 requests and
10 receives the security code from recipient 106. As in system 100, merchant 108 verifies the authenticity of the gift certificate via credit card processor 110.

To verify the authenticity of the gift certificate, merchant 108 transmits the certificate identifier, the security code received from recipient 106 and a redemption amount to credit card processor 110. Credit card processor receives the data and forwards
15 the data to credit card issuer 102. Credit card issuer 102 determines whether the gift certificate identifier is valid, whether the associated credit card account has sufficient available credit to honor the gift certificate and whether the security code received from merchant 108 matches the stored security code associated with the certificate identifier. As in system 100, credit card issuer 102 transmits an authorization code to credit card
20 processor 110, indicating that the transaction is declined or approved. In either event, credit card processor 110 forwards the authorization code to merchant 108 for completion of the transaction.

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At step 1314, the card authorization terminal determines whether the authenticity of the recipient should be locally verified. This may be accomplished ^{by} receiving a signal from the card authorization terminal operator, by sensing the presence of a scratch-off area of the gift certificate or by any method known by one of ordinary skill. If the determination of decision step 1314 is positive, the authenticity of the recipient is verified locally. In the case of a gift certificate embodied as a scratch-off card, this is accomplished manually by the merchant who may scratch off the removable latex covering to reveal the security code of the certificate. In the case of a gift certificate embodied as a card with a magnetic stripe, the card authorization terminal compares the security code received from recipient 106 with a security code stored on the magnetic stripe. Steps 916 and 920 of the process are substantially the same as those described with reference to figure 9.

Referring now to Figures 14A-14B, there are illustrated the instructions 1000 or process steps performed by CCI 200 when authorizing a redemption of a gift certificate in accordance with the security code embodiment of the present invention. At step 1410, CCI 200 receives a request for authorization of a gift certificate. The request for authorization originates with the merchant and is routed through CCP 300. The request for authorization includes the certificate identifier, the redemption amount and the security code received from recipient 106.

At step 1412, CCI 200 determines whether the security code received from recipient 106 is valid. This is accomplished by comparing the received security code with the security code stored in field 520 of the relevant record from certificate table 500. If CCI 200 determines that the received security code is not valid, CCI 200 transmits an

authorization code declining the transaction, as shown by step 1414. If CCI 200 determines that the received security code is valid, CCI 200 continues processing at step 1020. Steps 1012-1042 are performed as described with reference to figure 10.

While the best mode for carrying out the invention has been described in detail,
5 those familiar with the art to which the invention relates will recognize various
alternative designs and embodiments for practicing the invention. These alternative
embodiments are within the scope of the present invention. Accordingly, the scope of the
present invention embodies the scope of the claims appended hereto.

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